

THE FLOW THEORY OF ECONOMICS

A BRIEF INTRODUCTION
TO THE SUBJECT

.BY

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πάντα ῥεῖ καὶ οὐδὲν μένει

All things flow and nothing stays still.

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CHAPTER I

THE FLOW THEORY

THE flow theory of economics affirms, as a self-evident proposition, that if all goods and services produced are to be consumed or sold as fast as they are produced, the rate of flow of purchasing power to consumers must be at least equal to the rate of flow of the goods and services, and also that consumers must exercise their purchasing power to the full.

Instead of "goods and services" the term "prices" will frequently be used, this term signifying the aggregate selling prices of goods and services produced during any given time. Similarly the phrase "purchasing power" and the word "income" will be used alternatively, both expressions denoting the aggregate sums received by consumers and capable of being applied to the purchase of goods and services for purposes of consumption. Such purchasing power or income comprises, broadly, the wages of employees, the salaries of officials and higher employees, and dividends or profits.

We may therefore condense the equation of our thesis into this: Incomes (or Purchasing Power) must be at least equal to Prices, in order that goods

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and services may be absorbed as fast as they are produced.

If prices exceed incomes, then clearly some goods and services will remain unsold. If, on the other hand, purchasing power exceeds prices, then part of the purchasing power cannot be exercised, that is to say consumers will have more than sufficient money to purchase all the goods and services produced.

The principle thus briefly enunciated is, surely, self-evident, requiring no further proof or demonstration. Nevertheless it is a curious fact that, with a very few exceptions, no writers on economic subjects, no exponents of economic doctrines or panaceas, seem to have taken any account of the *relative* rates of flow of prices and incomes. If that is rather too strong a statement, we may at least affirm without fear of contradiction that very few writers or thinkers appear to have perceived the full significance and consequences of a disparity between incomes and prices, or to have detected the various causes which give rise to such disparity. And yet such causes are numerous, the inevitable consequences of the disparity they create being extremely far-reaching. In fact, it is probably true that in the whole of industrial and economic life, as it exists to-day, there is no one economic factor at all comparable in importance with the disparity between income and prices. We hope in this volume to demonstrate the existence of the disparity we have mentioned, some of its principal causes, and some of its most important effects.

How and why the flow conception of economics

has been overlooked, or its importance underestimated, would no doubt form an interesting subject for investigation. In it many factors are involved—not only purely economic, but social, psychological, moral and even religious. For our present purpose, however, we may content ourselves with the suggestion that one cause is that until very recently the whole of economics has been regarded in general as a static rather than a dynamic process. Economics thus affords one of many instances where the introduction of the idea of a flow or movement comes as a new and revolutionary conception, throwing a flood of light on to many phenomena previously but partially understood, and adding almost a new dimension to men's ways of thinking and of viewing life. Thus, for example, in mathematics, Newton's conception of "fluxions," now known as the differential calculus, gave men an enormously extended view of mathematics and its possibilities. It brought a whole range of previously non-understood and even non-perceived phenomena and processes within men's ken and comprehension. In biology, Darwin's theory of evolution, in which forms may be said to "flow" into one another, revolutionised men's whole conception of life, its processes, and of living beings. Similarly, the world of thinkers was once more startled by Einstein's theories of relativity, the flow of time, the rates of change of measuring-rods, and so on. A dynamic view of life, in all its aspects, thus seems to be steadily superseding the old static view, and to be bringing us back to the truth under-

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lying the old Greek conception *πάντα ῥεῖ*—"all things flow."

But enough of such philosophical speculations. Economics, the "dismal science," when regarded rightly, should surely be a vital and living science. It affects nearly every human being almost as much as breathing and sleeping. Upon it depends the flow to us of food, clothing, education, recreation, amusement, leisure. If anything should occur to check or diminish the rate of flow of goods and services to meet our needs, immediately our life—in the vast majority of cases at least—is checked or diminished; our activities are curtailed; our avenues of expression are blocked, and we may be reduced to the lowest ebb of poverty and distress—material, mental, even spiritual.

We propose to attack our problem first by re-enunciating a practically axiomatic statement of the flow idea, and then by an examination of certain factors in the world of economics to-day which, as we shall hope to demonstrate, disturb what should be an equation, with the result that, sometimes though rarely, incomes exceed prices (inflation, rising prices), but more frequently prices tend, in increasing measure, to exceed incomes (over-production or, as it is now being called, under-consumption). We shall try to show that no one has as yet been able to apply any system expressly designed to equate incomes with prices and thus to provide for a sane and healthy economic life in any given economic entity; and that such disturbances as occur to either side of the equation arise, not from

man's deliberate design (as a general rule), but practically automatically, from the operation of what are called—perhaps not too accurately—economic “laws.”

Then, very briefly, we shall attempt to trace out some of the more obvious consequences of this state of affairs, and to demonstrate how the inequality of flow is sufficient to account for most of the economic troubles of the world to-day, and of an almost incalculable amount of unnecessary and avoidable misery to countless millions of human beings, who are the victims of a system which, while being a splendid achievement of human ingenuity and enterprise, yet possesses one very serious flaw. To locate and understand the nature of that flaw should not prove too difficult ; further, once it is perceived and understood, it should not be difficult to suggest practicable methods of eliminating or counteracting it. Whether such measures are likely to be taken, in the near future, deliberately and with set intent, or whether they will be forced on men by the pressure of circumstances, is of course another question, with which it would be premature to deal at the present moment.

CHAPTER II

THE ORTHODOX THEORY

PERHAPS an apology is due to the reader for this chapter, because it sets out, in terms of the utmost simplicity, what has already been said in the preceding chapter, with, it is true, very slight elaborations. A diagram, again of the utmost simplicity, will also be employed ; later, the same diagram will be repeated, but with certain modifications which will gradually make it more and more complicated.

We are deliberately taking the risk of wearying the reader, even at this early stage, because of the importance of securing at the outset of our investigation an absolutely clear-cut and unequivocal idea of the flow theory. As previously stated, the flow theory commences with an axiom, which we trust is self-evident. If that axiom is accepted, we believe the rest will follow logically and automatically ; if it is not accepted, then all that will be deduced from it will necessarily be rejected. Hence our insistence on clarity at the beginning ; all our cards are placed on the table, open for inspection and the closest scrutiny.

Taking a bird's-eye view of the economic life of an economic entity—a nation, for example—we

perceive that, regarded as a whole, the units comprising the nation form collectively a producing agency, which we may term the producing system. This system produces goods and services—food, clothing, houses and everything else men need or use, as well as services, such as those of the governor, the policeman, the soldier and sailor, doctors, lawyers, domestic servants, and so on.

In addition, the units comprising a nation are also, collectively, a consuming agency ; each one of them consumes something that the productive system produces—goods of various kinds and in varying quantities, as well as services of many different kinds.

Goods and services are offered to consumers at a price, reckoned usually in terms of money. We have already decided to call the aggregate total of goods and services by the term “prices.” The aggregate of the incomes which the body of consumers receive during any given period we have also agreed to call “incomes” or “purchasing power.”

We come now to our diagram (page 8).

The productive system is here shown as pouring out on one side a stream of goods and services, and on the other side a stream of incomes or purchasing power. In the lower part of the diagram the goods and services stream is cut up into equal sections, to represent the goods and services produced during successive periods, such as successive weeks, months or years. The stream of incomes is also shown cut up into similar equal sections, to represent the incomes distributed during successive and similar periods.

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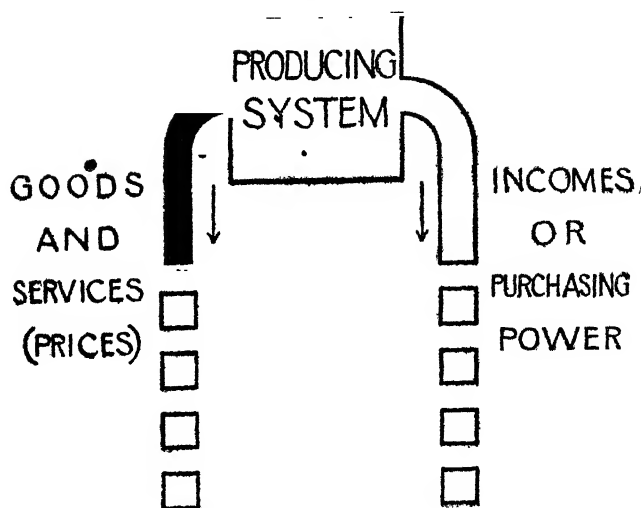


DIAGRAM I

The diagram may be considered to represent what we may call the orthodox conception of economic life, which considers that the prices of all goods and services offered for sale are made up, in the last analysis, of wages, salaries and dividends or profits, so that the stream of prices must be exactly equal to the stream of incomes, eventually and in the long run. We may anticipate our final conclusions so far as to point out that, if this were really so in actual practice, we should have very few if any economic troubles; at any rate there would always be in existence, somewhere, sufficient purchasing power to purchase all the goods and services produced, assuming only that those goods and services were actually needed and desired by consumers. Over-production

would be meaningless, until and unless the wants and desires of consumers were fully met and satisfied ; for no matter what goods "cost," that "cost" must have been, or will be, paid out to someone somewhere, and therefore sufficient purchasing power to purchase them must exist somewhere. That this theoretical state of affairs is very different from what actually happens in practical life we hope to demonstrate shortly, as we trace the operation of factors which make the two streams of prices and incomes unequal.

But before we go any further, let us meet an objection which may be raised, and introduce a slight complication into our diagram.

Whilst Diagram I is intended to represent, theoretically, the productive system as a whole, it does not represent any one factory, farm, mine, etc., unless these are absolutely self-contained and independent of any outside agency for supplies of any kind.

Except in the most primitive communities, the actual state of affairs is more accurately represented in Diagram II. Here we have the productive system divided up into two main classes of producing agencies: (1) that which produces raw materials of use only to other producing agencies; (2) that which turns out finished products for consumption by the consuming public. The first turns out no goods for the consuming public, although it provides that public with incomes. The second, having to pay the first for raw materials, turns out an aggregate of goods and services (prices) larger than the incomes it dis-

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tributes. But—according to the orthodox theory, at any rate—this is of no practical consequence, because the aggregate of incomes distributed by the two kinds of producing agencies is exactly equal to the stream of finished goods emerging on to the market

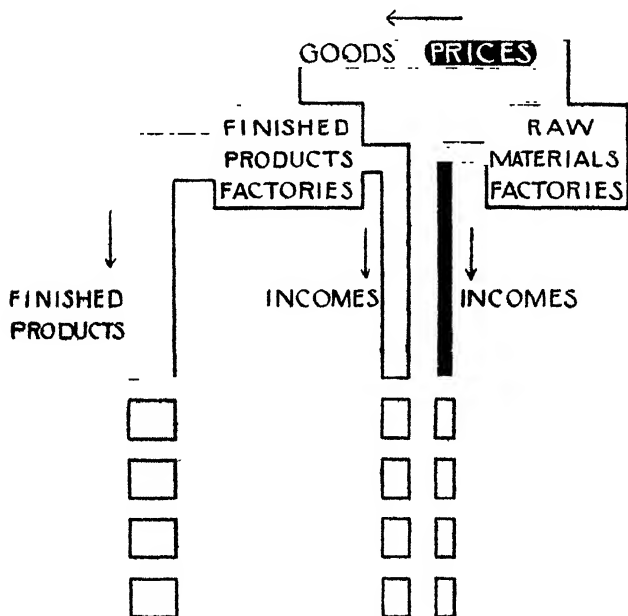


DIAGRAM II

for the consuming public. These simple facts—assuming them for the moment to be facts—are illustrated graphically in Diagram II.

We frankly admit that all this seems obvious : so obvious that it is almost an insult to an intelligent person to set it out in words as well as in a diagram

that a child can understand. But will the reader bear with us a little longer whilst we endeavour to locate and explain quite a number of factors which, in the practical economic life of nations and individuals, introduce themselves and very seriously disturb the idealistically simple system we have been describing ?

CHAPTER III

THE PROFIT TIME-LAG

HAVING now cleared the ground by a simple enunciation of first principles which, as stated, we hope are axiomatic, we can proceed to examine our fundamental equation in detail, in order to ascertain how far the theoretical equality actually works out in practical economic affairs.

Let us first make a preliminary examination of the time-factor. We shall have to study the operation of this time element from several points of view later on, but for the present will confine ourselves to one of its simplest aspects, namely, that of the time-lag due to the delayed distribution of profits or dividends.

Purchasing power, or income, is made up, as we have seen, of wages, salaries and dividends or profits. Now it is clear that no dividends or profits can normally be actually *distributed*, so as to become available as purchasing power, until they have been received by the sellers of goods. But profits are charged into selling prices at the time sales are made. The result is that if a quantity of goods, priced let us say at 100 units, contains say a profit of 20 units, up to the moment of selling only

80 units will have been actually distributed as purchasing power. The remaining 20 units will become available as purchasing power only after *all* the goods are sold and paid for.

Let us suppose that 100 units of goods (prices) are placed on the market in each unit of time—in each month, for example. Then, without introducing any other external factor (with which we shall have to deal later in our investigation), only 80 units can be actually sold and paid for, because only 80 units have been actually distributed as wages and salaries. Twenty units of goods therefore remain unsold, and must remain unsold, because there is no more purchasing power, at that time, available.

Now those 80 units bring in to the producing system 20 per cent., or 16 units of profit. Taking the most optimistic view, let us suppose that those 16 units of profit are actually employed and expended as purchasing power at the earliest possible moment, that is in the second period. The total purchasing power distributed in the second period will then be $80 + 16$, or 96 units. The quantity of goods available for sale is now 20 left over from Period I and 100 produced in Period II, total 120. Ninety-six only of these can be sold, thus using up all the purchasing power at the moment available. Twenty-four units of goods must be carried forward into Period III.

The profit obtained by the producing system from the sale of the 96 units is 19.2 units, which, added to the purchasing power distributed in Period III,

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makes 99.2 units of purchasing power available. Twenty-four units of goods are brought forward from Period II, and 100 units are produced in Period III, making 124 units of goods available for sale; 99.2 units only can be sold, yielding a profit of 19.84 units; 24.8 units will remain unsold.

Period IV thus has available for sale 124.8 units of goods, to buy which $80 + 19.84$ or 99.84 units of purchasing power are available. 99.84 units of goods can thus be sold, yielding a profit of 19.97 units, and leaving 24.96 units of goods unsold, to be carried to Period V.

Similarly, Period V places 124.96 units of goods on the market, and distributes 99.97 units of purchasing power, which purchases 99.97 units of goods, leaving 24.99 units of goods unsold, to be carried to Period VI. From Period VI onward the position remains practically stationary; in round numbers, in each period 125 units of goods are placed on the market, to purchase which 100 units of purchasing power are available. There is thus a perpetual balance of 25 units of goods remaining unsold, to be carried forward to the succeeding period.

These 25 units of goods unsold, and unsaleable, represent profits, accumulated in the producing system, which cannot be converted finally into money or purchasing power because there is not sufficient purchasing power at any given moment available.

The above figures are set out in the following table;

THE PROFIT TIME-LAG.

Period.	Incomes Distributed.			Goods.						
	Wages and Salaries.	Profit.	Total.	Produced.			Brought Forward.	Total for Sale.	Sold.	Unsold.
				Cost.	Profit.	Selling Price.				
I	80	—	80	80	20	100	—	100	80	20
II	80	16	96	80	20	100	20	120	96	24
III	80	19·20	99·20	80	20	100	24	124	99·20	24·80
IV	80	19·84	99·84	80	20	100	24·80	124·80	99·84	24·96
V	80	19·97	99·97	80	20	100	24·96	124·96	99·97	24·99
VI	80	20	100	80	20	100	25	125	100	25
etc.										

From this simple, elementary phenomenon quite a number of curious and interesting effects follow, but it would be premature at the present stage of our inquiry to trace them out.

Recapitulating, we perceive that as soon as each lot of goods is sold, consumers have parted with all their purchasing power, and the producing system has in its possession not only the whole of the purchasing power available but also a balance of goods, representing its profits, which no consumer can buy. The balance of goods can be disposed of only in a succeeding period, and then only by displacing a similar quantity of new goods which again have to be carried forward to yet another period ; and so on *ad infinitum*, until and unless some additional purchasing power appears on the scene from outside the production-consumption cycle we are considering.

Condensing the essence of the phenomenon into a nutshell, we perceive that, *at any given moment*,

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under our present economic system, there is always available for sale a quantity of goods greater than the total purchasing power available, this margin of goods representing profits. Expressed slightly differently, incomes, *at any given moment*, are always less than prices; they lag behind, and can never catch up.

The emergence of this profit time-lag, as we have called it, may perhaps have caused the reader to begin to doubt whether our fundamental equation $\text{Incomes} = \text{Prices}$ is really true in practical economic affairs. In the following chapter we hope considerably to reinforce those doubts.

CHAPTER IV

SAVINGS: SUSPENSION OF PURCHASING POWER

UP to this point we have assumed, in order to keep the issues we have been pursuing clear and unequivocal, that the whole of the incomes distributed by the producing system—wages, salaries and dividends or profits—have been applied as purchasing power at the earliest possible moment. In actual life, however, we know that this is very far from being the case. An appreciable proportion of wages and salaries is nearly always, in one way or another, saved—that is, not immediately expended as purchasing power. Probably a considerably larger proportion of profits or dividends is also, as a general rule, saved.

Now we are not here considering in any sense questions of morality, of ethics, of expediency, in the conduct of economic life. We are concerning ourselves solely and absolutely with what we may call the mathematics of economics, in that impersonal and detached spirit which alone is proper to mathematical investigations. We are endeavouring to trace out, with complete indifference to all social or moral implications, the purely mathematical

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consequences which automatically follow certain economic processes.

In this matter of savings we have a process at work which cannot but have a very far-reaching effect on our whole economic system. This factor alone, if carried to extremes, and always provided that no other factor were introduced to modify or counteract it, would be capable, in a short time, of wrecking or at least bringing to a standstill our whole economic machinery.

For savings clearly represent suspended purchasing power—purchasing power not employed as such. For every unit of purchasing power saved, somewhere there is a unit of price also suspended; in other words, every shilling saved means somewhere goods and services to the value of a shilling not sold, left stranded high and dry. And there it will remain, high and dry, until and unless the sum saved is applied to its proper purpose—that of purchasing it for consumption.

In savings we thus have a factor of primary importance, which destroys all semblance of reality in our fundamental equation $\text{Incomes} = \text{Prices}$. In view of the profit time-lag, dealt with in the preceding chapter, and of the savings factor we are now dealing with, our equation must be modified as follows:

Prices are, at any given moment, *greater than* Incomes by (a) the element of profit contained in Prices, and (b) all Income saved.

Once again, it is a remarkable fact that this direct and obvious effect of saving has been mentioned

scarcely at all by most writers on economics—still less by business men (even producers, whose interests are so vitally affected), or by politicians. And yet the fact stares us in the face that every pound saved means a pound's worth of goods and services somewhere unsold.

For the sake of example, suppose, in any given period, the whole body of consumers so arranged their lives, effected so many "economies," that they were able to save half their incomes for that period. Then clearly the producing system would have left on its hands the product of half a period, which nobody has bought. And there it would remain, piled up in factory, shop or mine, in many cases deteriorating in quality, until such time as the consuming public decided to spend its savings and buy the accumulated goods and services and consume them.

We do not wish at present to introduce too many complications into our simple investigation, but the reader cannot but perceive that savings, from our present point of view, constitute a direct cause of unemployment. For, if industry has left on its hands a quantity of goods which consumers do not buy, obviously it must, in many cases, reduce its output of new goods; so it curtails its orders for raw materials and dismisses some of its employees. The wheels of industry slow down, and an army of unemployed comes into being.

We mentioned above that were the factor of savings not counterbalanced, in some measure, by some other factor, it alone would be sufficient to wreck

the economic system. The nature and the method of operation of counteracting factors we hope to deal with later on, when we have examined the origin and nature of money and credit.

The reader will no doubt appreciate the fact that, in an investigation of this kind, it is essential to isolate each factor, exactly as one does in the investigation of any physical phenomenon in a laboratory, and trace out its effects, quite independently of all other factors. Then, when all the relevant factors have been detected and their effects traced, the work of synthesis can be begun, one factor being weighed against another, and the net result of all the factors arrived at. That is precisely the method we are attempting to follow in the present investigation of the factors involved in the flow theory of economics.

CHAPTER V

INVESTMENT OF SAVINGS: DESTRUCTION OF PURCHASING POWER

IN the preceding chapter we have seen that savings are suspended purchasing power, and hence have the effect of suspending or delaying the sale of goods, so that prices are, so long as the savings remain unexpended in consumption, greater than incomes.

But worse things may befall our fundamental equation, $\text{Prices} = \text{Incomes}$, an equation which even already has become somewhat tattered and ragged. To make the issue perfectly clear, let us take a simple concrete example.

Imagine the producing system to bring out 1,000 units of goods per unit of time, say per week, employing for the purpose 1,000 men and paying out as wages, salaries and dividends 1,000 units of purchasing power—let us say £1,000 for the sake of simplicity. According to orthodox economics, the cycle of production and consumption can continue indefinitely. At the end of each week there are 1,000 articles for sale, and consumers have in their possession (ignoring the profit time-lag), 1,000 units of purchasing power. The con-

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sumers then exchange their 1,000 units of purchasing power for the 1,000 articles. On Monday morning the cycle recommences, and so on, week by week.

Now suppose that, after a number of weeks, a group of consumers manage to save amongst themselves 1,000 units of purchasing power. They have "economised" and managed to live on less than 1,000 units per week. Consequently, the producing system has left on its hands 1,000 units of goods, which cannot be sold, because the equivalent of their prices has not been applied to their purchase.

Next, the consumers, desirous of investing their savings, and drawing interest on them, hand the 1,000 units of purchasing power they have saved back to the producing system, in exchange for merely a receipt, which may be called a share certificate, a debenture or a number of other names. The producing system then possesses *both* the 1,000 unsold goods *and* the spare 1,000 units of purchasing power.

Then the producing system takes into its employ 1,000 more people, using the extra 1,000 units of purchasing power to pay out their wages, salaries and dividends, and thus obtaining 1,000 extra units of goods. Now these *extra* 1,000 units of purchasing power are clearly needed to purchase the 1,000 *extra* units of goods.

What, then, is to become of the first 1,000 units of goods left unsold? Clearly they cannot now by any possibility be sold, because the 1,000 units of purchasing power which created them have been diverted, and are needed for the purchase of

a fresh batch of goods. Those 1,000 units of purchasing power have, so far as the first cycle of production is concerned, been completely destroyed, wiped right out of existence, and consequently 1,000 articles are definitely and finally stranded, high and dry, with no possibility of their being sold, until and unless an additional 1,000 units of purchasing power appear on the scene from some outside source.

Our fundamental equation is now completely shattered, for a slice has been taken out of one side of it and completely destroyed. Prices are now, finally and categorically, greater than incomes.

In order to illustrate our several points graphically, we may utilise a modified form of our first diagram. In Diagram III we have the usual stream of goods (prices) on one side, and on the other side the corresponding stream of incomes (wages, salaries and dividends). The time-lag due to the delayed distribution of profits is shown by the block of incomes lagging behind the block of prices. A portion of the income-block is marked off and suspended in mid-air, to indicate savings, an equal area of prices being also marked off, to show that the goods have not been sold. Another portion of the income-block is cut right out and distributed as income in Period II, producing a corresponding block of prices in Period II.

Period II thus shows, on the goods side, a block of goods brought forward from Period I, corresponding to savings, and an entirely new block corresponding to savings invested. On the income

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side, Period II has obviously less income available than there are total goods available. Here we have one of the simplest forms of what is known as "over-production," though the explanation and

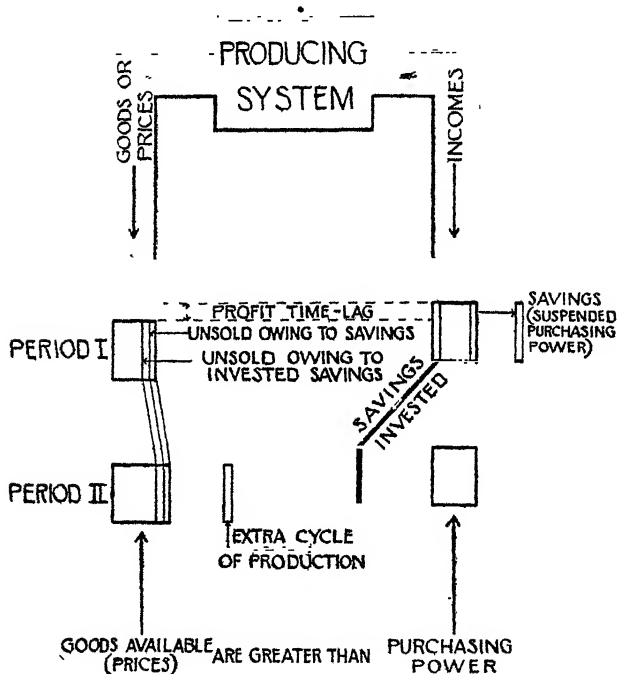


DIAGRAM III

the diagram make it quite clear that its more correct name is "under-consumption."

Over and over again has it been affirmed by leading men, both in industry and in politics, that

savings should be encouraged. Even school children have been taught to save their pennies, and banks have recently provided special cash-boxes in which people may store their saved incomes. Then people are advised, encouraged, coaxed and cajoled into investing their savings. The inevitable and automatic result of such saved and invested purchasing power has just been demonstrated. And yet scarcely a voice is raised to point out this simple, mathematical result of the investment of savings.

Once more, we are *not* here dealing with savings in their moral or social aspects. We frankly and gladly admit that it is thoroughly sound, salutary and wise for people to save. If every one lived from hand to mouth, consuming to the limit of production, and putting by nothing for the future, even worse disasters might befall. All that, and much more, is admitted. But it has nothing whatever to do with the plain facts of arithmetic. And arithmetic demonstrates, beyond, we believe, the possibility of doubt or denial, that invested savings destroy the purchasing power needed to consume the products of one cycle of production, thus making unsaleable a corresponding quantity of goods.

As, in our modern life, savings are continually being made and continually being invested to finance fresh production, it follows that there is mounting up an ever-increasing quantity of goods, unsold and unsaleable. The productive system thus has to carry forward an ever-increasing balance of "surplus" goods which no one can buy, however much they may need the goods, because investment

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has struck out of existence the purchasing power necessary to purchase the goods of that particular cycle of production.

The reader will probably agree with us that the investment of savings, unless partially counter-balanced by some other factor, would very soon wreck our economic system. The mere fact that it does not do so, in a spectacular manner, is a clear indication that some other mitigating factor is at work. It is true, of course, and no observant person can deny it, that the condition of industry is far from satisfactory. On every side we see indications that production is no longer a problem; ample means exist for producing vast quantities of almost everything human desire can name. But the sale of what is produced is a stiff problem, many would say is the one great problem which faces industry, the solution of which is generally regarded as so difficult as almost insoluble. Nevertheless, the problem of consumption has not brought industry to a complete standstill. There are, as said, other factors which not only mitigate the trouble, but also, by their complicated effects, serve to obscure the clear, straight issues we have been trying to isolate. If the reader will have patience with us a little longer we shall hope to introduce and explain presently these other factors, and indicate how far they are capable of making good the inequality we have discovered in our primary equation $\text{Incomes} = \text{Prices}$.

CHAPTER VI

RESERVES

AN excellent and important example of suspended or destroyed purchasing power is afforded by the reserves which public companies and many other businesses and institutions accumulate. Although no new principles are involved, reserves yet form such a very large item in our economic system as to merit a separate, though brief, examination.

Reserves are, of course, taken out of profits ; they are often described, and accurately, as undistributed profits. They are a portion of the income side of our fundamental equation which has been sterilised and rendered inoperative as purchasing power. Hence, for reasons already amply explained, corresponding to them in magnitude, there must remain somewhere in the producing system a portion of prices, that is goods and services, also suspended and unsaleable. This holds good so long as the reserves remain merely as reserves.

But, as is well known, it is a very common practice to capitalise reserves, for example, by issuing additional shares to shareholders. The accumulated and undistributed profits are thus ploughed back into the business, invested in it,

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and consequently the purchasing power which they represent is wiped out of existence, annihilated, leaving a corresponding quantity of goods finally stranded—unsold and unsaleable.

It is not our purpose here to deal with this, or with any of the other factors we are studying, *quantitatively*, that is on a statistical basis. To do so would involve a good deal of research, computation and masses of figures. Moreover, for the end we have in view it is quite unnecessary. Later on, nevertheless, we hope to find a short cut which will give us, at any rate approximately, a general idea of the total *net* result of all the factors we are studying. For the present, however, we are dealing with each factor purely *qualitatively*, and trying to show in which direction it affects the relation between prices and incomes.

Touching very hastily, however, on the matter of the quantity of reserves or undistributed profits, any business man will agree that it must be a total of considerable magnitude. For it is the exception rather than the rule for a company or business to distribute as dividends in any given year as much profit as it has made during that year. In many cases little more than half the profit made is distributed as dividends; this applies especially, of course, to young businesses which are engaged, on perfectly sound and prudent financial principles, in strengthening their position, in building up their reserves, and so on. The meaning of this, in plain language, is that the business concerned is taking from consumers more than it is distributing to them.

In other words, it is accentuating the disparity between prices and incomes, in the direction of making incomes less than prices.

The enormous reserves built up by many large businesses, by banks, by insurance companies, by many other financial institutions, and even by the Government itself (in such a fund, for example, as the road fund), afford other indications that the total of reserves, of undistributed profits, of sterilised income, must be a very large one.

We sincerely hope it is unnecessary to assure the reader that, having some little experience both of modern business and of accountancy, we are perfectly well aware of the soundness, nay the necessity, from the ordinary business point of view, of accumulating reserves. What savings are to the individual, so are reserves to the company or business. It is only obvious prudence to put by something for a rainy day, to meet some unforeseen emergency, to provide for extension of premises, and so forth. Not to do so is to court disaster. All this we fully admit. Nevertheless, as repeatedly said, we are *not* here concerned in the least with the morality or the soundness of modern economic or financial practices from the point of view of the individual or of a group of individuals, such as those concerned in a business. We are dealing with, we trust, mathematical coldness and impartiality, the inevitable and automatic results of certain well-known and accepted methods of conducting our financial affairs, from the point of view of that abstraction the economic system as a whole. Not

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for one moment are we attributing or even suggesting blame or censure of any kind whatsoever to any individual, or any group of individuals, or any one section of the community.

We are dealing with the financial and economic system as a whole, as a piece of mechanism. How that mechanism came into being, and who is responsible for its design, are questions with which we have no concern. We regard it solely, as said, as a piece of mechanism ; there are a thousand indications that the machine is working badly. We are therefore examining it, and taking it to pieces, precisely as a mechanic would examine and take to pieces an engine or any other machine to find out *why* it is not working smoothly and fulfilling the task for which it is presumably intended.

CHAPTER VII

DEPRECIATION

THE principles involved in the various kinds of depreciation are the same as those already dealt with. Nevertheless, just as in the case of reserves, dealt with in the preceding chapter, depreciation forms such a large item in the accountancy of modern business as to justify separate mention.

Let us examine first that kind of depreciation which is intended to represent the wear and tear of buildings, plant, tools and the like. If a machine cost, let us say, £100, and is estimated to have a useful life of 10 years, then a simple method of depreciating it, or writing it off, as it is called, is to charge each year £10 against the cost of whatever it is the machine produces. At the end of 10 years the machine is worn out and thrown away, the £100 saved being then expended in buying a new machine to replace the old one. That is the principle involved, though the particular method described is a little crude.

The effect of this procedure on the flow of prices and incomes is clear ; each year £10 has been added to prices, but no corresponding figure appears on the income side of our primary equation. In other

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words, each year £10 has been collected from the consuming public, through the medium of prices, more than has been distributed as income.

But, as we are assuming that the whole £100 which has been saved is expended at the end of 10 years on the purchase of a new machine, that £100 reappears as purchasing power. The net effect is therefore that of a time-lag, though in this case the lag is one of £10 for 10 years, £10 for 9 years, £10 for 8 years, and so on—a total of 550 pound-years.

It must be clear, without further explanation, that very serious effects may occur to industry owing to purchasing power being held up in this way, and thus causing an accumulation of goods in excess of the purchasing power actually used as such.

All this is simple enough. But there is another meaning to the term depreciation as used in modern accountancy. For it is a common practice to write down, that is to depreciate, buildings, plant, tools and so on, far more than the extent to which they actually wear out. In fact, it is well known that many flourishing businesses succeed in writing off the whole cost of many of their assets, that is, depreciating them to zero. The money value of such assets then disappears from the balance sheets, and goes to form what is known as a secret or hidden reserve. This is a procedure so generally practised that many millions of pounds' worth of buildings, etc., are written out of financial existence every year, in this country alone.

The effect of this practice--again a thoroughly sound and commendable one, from the point of view of the individual business concerned—is of course to destroy purchasing power. For all such depreciation has to be charged into prices; the consuming public thus pays for it all; but there is no corresponding amount distributed to the consuming public as income. Purchasing power, in other words, is taken from the consumer, and then wiped out of existence.

We thus have in depreciation, of the two kinds named, first a serious suspension of purchasing power, and secondly a serious destruction of purchasing power, both of which add still further to the discrepancy between incomes and prices, causing prices to become ever greater than incomes, partly temporarily and partly permanently, and so preventing the sale of some of the goods and services produced.

Will the reader forgive us for repeating that the practice of depreciating buildings and other assets is eminently sound and even praiseworthy, from the point of view of the individual business concerned; but its effect on the producing-consuming system as a whole is similar to that of a spanner thrown into a gear-box—it prevents the wheels from going round.

CHAPTER VIII

BANK INTEREST

BEFORE passing on to certain rather more subtle factors which affect the relative rates of flow of incomes and prices, we may turn our attention for a few moments to bank interest, which affords us yet another example of the principles with which we have been dealing. For in the operation of bank interest we have a good example of time-lag, of suspended purchasing power, and of destroyed purchasing power.

In the first place, it is well known that very few businesses to-day can or do carry on their affairs without bank overdrafts, either temporary or more or less permanent. Hence nearly all businesses must provide for the item of bank interest as an intrinsic part of costs. In other words, bank interest forms a definite part of prices, at any rate in the majority of cases.

Moreover, the charge for bank interest enters into prices *at once*—that is, is charged into prices the moment goods are sold. But, after allowing for that part of bank charges which we may concede represents the live cost of administration—such as the wages and salaries of the bank officials who

arrange the overdraft, make the necessary ledger entries, and so on—the remainder of the bank charges represents profit to the bank. These profits, as a rule, will become available for distribution as dividends shortly after the close of the bank financial year or half-year, as the case may be; in any event, at a date later than that on which they operated as price. This is, of course, a simple illustration of time-lag, income lagging behind prices, in terms of time.

But, as we know, it is very unlikely that the whole net profit derived from interest charges will be distributed as dividends, and thus become effective as purchasing power. Some of it is almost certain to be carried forward in profit and loss account, or to be transferred to reserve. This, as we know, means that it is converted into suspended purchasing power.

Some at least of it is likely to be invested by the bank; it thus becomes destroyed purchasing power.

Further, every few years or so portions of such accumulated and undistributed profits will probably be capitalised, by issuing, for example, additional or bonus shares to the shareholders. Thus again they vanish from the financial field as purchasing power, and so there is nothing to balance that portion of prices which they originally represented.

We freely admit that the item of bank interest, charged into cost, say of a motor-car by the firm which sells the car, is probably quite a small one. But it must be recollected that in making the

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complete car many articles of equipment, as well as materials in various stages of manufacture, are purchased from other firms, and that in all probability most of these have also charged a small amount for the item of bank interest in their costs. Hence it may well be that the sum of all these small charges for bank interest may amount to a considerable sum and form quite an appreciable percentage of the total selling price.

Returning for a moment to first principles, and recognising the obvious truth that if all goods and services produced are to be sold, there must be somewhere, at some time, their full equivalent in available purchasing power, we realise that it is often necessary to follow up this or that element which appears in prices the moment goods are sold, and which is thus taken from consumers at that time, and trace it, often through devious paths, before we can determine whether it does eventually reappear in the financial field as effective purchasing power. Sometimes it does so appear, but seldom until a later date, thus creating the time-lag with which we are familiar. At other times it is first suspended for a time, and then wiped out of existence by being invested, or by being in some way or other capitalised, and thus ceasing to exist as purchasing power.

The reader will no doubt be able to work out for himself other examples of the operation of the few simple principles which have been enumerated.

CHAPTER IX

INSURANCE

AT the risk of wearying the reader by over-proving our thesis, we propose to consider briefly yet one other of the simpler factors which illustrate the principles already enumerated. That factor is insurance. Taking insurance in its simplest aspect, as merely an accumulation of savings, taken, of course, out of income, which will eventually be expended as purchasing power, we have an example of delayed or suspended purchasing power. In many cases, probably in the majority, the accumulated savings remain suspended for considerable periods; the low rates of premium for insurance against fire, burglary, and the like, afford proof of the truth of this statement.

But insurance companies usually make profits, that is, they take from the incomes of their clients more than they pay out to those clients; the remainder, representing profits, is partially restored to the general fund of purchasing power in the form of dividends, but a considerable proportion is usually retained to build up reserves, and in most cases is invested, that is, employed to start a fresh cycle of production-consumption. The net result, there-

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fore, is to cause the total of purchasing power available to be less than the total of prices.

Insurance companies are usually proud—and from their point of view, as well as from that of their clients, very properly proud—of the size of their reserve funds, which frequently run into many millions of pounds. As we know, this represents millions of pounds withdrawn from the stream of purchasing power, leaving a corresponding block of prices or goods unsold and unsaleable.

Whilst it is true that in most cases only a very small fraction of a man's income is devoted to insurance, nevertheless the aggregate sums allocated to insurance by the whole nation each year must amount to many millions of pounds, thus holding up as unsold and unsaleable the same number of millions of pounds' worth of goods and services.

Thus, according to Mr. Snowden, during the four years from August, 1914, the industrial insurance companies have collected over £400,000,000 more than they have returned in benefits to their clients. For every working day during 1926 clients paid £147,953 in premiums and received in return about £45,000.

Large numbers of men and women in the military, naval, educational and civil services, as well as in ordinary civil life, contribute towards annuities, pensions, and the like. All these contributions, of course, come under the same category; that is, the funds are fed from incomes, thus depleting the purchasing power available for actual purchase of goods and services, and leaving corre-

spending quantities of goods and services without purchasers.

The National Insurance scheme can also be included with the above. The contributions levied on employees and employers are charged into prices just as much as live wages and salaries are charged into them. But by no means the whole of them is restored to live purchasing power by being paid out to doctors, nurses, hospitals, chemists, and so on. The balance represents at the best purchasing power more or less indefinitely suspended, but more usually it represents destroyed purchasing power, because such balances are usually invested, being thus applied to a new cycle of production-consumption. The National Health Insurance Fund, for example, has grown as follows—

ACCUMULATED FUNDS OF THE NATIONAL HEALTH INSTITUTIONS OF GREAT BRITAIN AND NORTHERN IRELAND, 1915-24—

1915	.	.	.	.	£32,749,000
1916	.	.	.	.	41,224,000
1917	.	.	.	.	51,446,000
1918	.	.	.	.	62,119,000
1919	.	.	.	.	71,882,000
1920	.	.	.	.	81,443,000
1921	.	.	.	.	92,231,000
1922	.	.	.	.	100,413,000
1923	.	.	.	.	109,390,000
1924	.	.	.	.	116,152,000

That is to say, roughly £10,000,000 is every year abstracted from the incomes of employers and employees, and charged into total prices, more than

is restored to consumers' incomes. Purchasing power having been thus reduced, a corresponding quantity of goods and services has been stranded without purchasers.

Insurance thus affords us yet another example of a small, but steady, persistent and cumulative drain on purchasing power, causing prices to become steadily, persistently and cumulatively less than total incomes. And then we wonder how it is that manufacturers and traders experience such difficulties, which grow more and more serious every year, in selling their goods, and that more and more thought and energy has to be devoted to the selling end of business, so that salesmanship is rapidly becoming the most important aspect of modern business, the actual production of goods being relegated to a quite secondary position.

With all these steady drains on purchasing power, resulting necessarily in accumulations of unsold and unsaleable goods and services, is it surprising that there is an unemployment problem? Already there are more goods and far more services than there is purchasing power available; so what purpose would be served by producing still more goods—no matter how low their cost might be? Clearly the need is not for more goods or services, but for more purchasing power, so as to make it possible to sell the existing glut of goods and services. We hope later to offer a few suggestions as to how it may be possible to increase purchasing power so as to compensate for all the reducing factors we have enumerated, and others still to be mentioned, and thus to make total incomes

equal to total prices. But we have still considerable ground to cover first, so we must not anticipate. But we have thought it well to state that we are convinced the problem is by no means insoluble, and that however great the difficulties may, at this stage of our investigation, seem to be, yet they are not insuperable.

CHAPTER X

LOCAL OR TEMPORARY INFLATION

WE come now to a factor somewhat more subtle and elusive than the comparatively simple ones which we have so far considered. In order to illustrate the operation of what we have called local or temporary inflation, let us take a concrete example.

Let us suppose that, for some reason or other, there is a sudden increased demand for a certain article or group of articles ; let us say, there is a sudden increase in building activity in a certain district, or for that matter a number of districts. This sudden boom in building operations may become effective through a diversion of money or credit from other channels of expenditure, or it may be due to a flow of new created credit into building. For our present purpose the source of the new flow is of no consequence, as the effect is the same in any case.

It is common knowledge that the usual and immediate effect of a boom in building, of an increased demand for building materials, is to send up the prices of materials, even of those already in existence. How many times has one read in the newspapers that such and such an article was in

brisk demand, and prices "improved" accordingly?

Now we may assume for the moment that all the charges for these materials, excepting that of profit, have already been paid out as wages and salaries. The increased charges thus mean an increase of profit. But as this will not be available as purchasing power until it is received by the sellers of the goods, there will be a further augmentation of what we have been calling the profit time-lag.

Further, as it is from profits principally that savings are effected, and from profits that much investment is made, there will be also augmentation of suspended and of destroyed purchasing power. Thus we see that the first and more obvious effects of a boom in any particular industry or district is to increase what we may term the normal disparity between incomes and prices.

But more often than not the effect will not be confined strictly to the particular industry we are considering. Nowadays industries are so interlocked, and so dependent one upon another, that a rise of prices in one industry will frequently tend to produce a general rise of prices over a large area of the business world. Thus, for example, iron, steel, lime, wood, and many other materials and articles used by builders, are used also for many other industries; and as the prices of these materials and articles are forced up by the increased demand from the builders, they will be raised also for every one who uses those materials or articles. So we get, over a wide area, an inflation of prices, the immediate

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effect of which is, as we have seen, an increase of the normal profit-lag, an increase of suspended purchasing power, and an increase of destroyed purchasing power.

Hence the snowball effect of a boom in even quite a small corner of the industrial world may grow to large dimensions, producing its reverberations over a very wide field, and operating to augment the normal disparity between total prices and total incomes.

It is true, of course, that after a time, when producers have been able to increase their output, supply may catch up to or even pass demand ; then prices will fall again. But meanwhile the mischief has been done, and it is highly improbable that it can ever be neutralised to any appreciable extent. For it is well known that it is, as a general rule, easier for prices to rise than to fall, and even when they do fall they rarely fall to the level that existed before they began to rise.

For, quite naturally, producers seize every opportunity to put up their prices to the maximum that consumers are willing to pay ; equally naturally, they resist by every means in their power attempts to lower prices. Nowadays competition is so keen that even in boom periods the margin of profit is not very great, so that to lower prices appreciably often means to destroy all hope of profit.

The factor we have been considering—namely, that of the inflationary effect of booms in industry—brings us almost face to face with what we shall presently perceive is the one great difficulty we shall have to

overcome, if ever we are to find a way out from what is daily becoming more and more widely recognised as our economic *impasse*. That supreme difficulty is inflation—the bugbear of economists the world over.

Even though, for the reasons stated, total incomes are, and must normally be, less than total prices, yet when incomes are increased, as a boom tends to increase them, our main trouble, so far from being removed, may even become worse. For to add to the total of incomes by augmentation of the profit element is not necessarily to increase the total of purchasing power relatively to total goods or prices. On the contrary, at least a considerable proportion of the profit increase will in the ordinary course of events be saved, and applied to capital outlay—that is, employed to start an entirely fresh cycle of production-consumption. In other words, such increase of purchasing power, instead of being applied to wipe out permanently the disparity between total incomes and total prices, is employed to create a fresh crop of prices. Hence matters are little, if any, better than before.

By what device or devices this somewhat remarkable state of affairs can be overcome, it will be our business to inquire at a later stage of our investigation into the workings of our present economic system.

CHAPTER XI

GENERAL INFLATION

THE effect of general inflation on the relative flow of incomes and prices is similar to that of local or partial inflation arising in a particular industry or industries, though of course on a much wider scale. It affords a good illustration of the difficulty of correcting that disparity between incomes and prices which must necessarily occur in our present economic system.

Let us suppose that a general trade boom is in progress. The classic example is that which occurred during the war period and for a short time afterwards, say 1914-1919. Immediately on the outbreak of war the demand for goods and services of almost every kind increased enormously. Huge loans were floated ; great streams of money, representing *effective* demand, poured into industry. Demand became greatly in excess of available supply. Prices at once rose, and soon began to soar to dizzy heights.

The immediate effect of this, as we saw in the last chapter, was to swell the total prices of goods already in existence, thus augmenting the profit element contained in those prices. A considerable

increase of the profit time-lag was thus created. Following on profit-increase, great savings were effected, and a large proportion at least of those savings was either invested, much of it in further war loans, or applied to trade purposes—that is, used to set in operation fresh cycles of production-consumption. Vast sums were applied to capital extension—that is, to building new factories and extensions, making and installing new machinery, and so on—thus piling up fresh prices which would enter into the costs of future production, as we shall see more in detail in the next chapter. Meanwhile, money continued to pour into industry like water. Anything that the Army, Navy or Air Force needed was bought and paid for, no matter what the cost. Provided the goods and services were obtainable, the money to pay for them could be and was found.

More and more aggregate profits were made by the producing system ; personal expenditure was steadily reduced to a minimum, at any rate by large classes of the community ; every one was encouraged, almost commanded, to save. Those savings were rapidly invested, most of them being lent to the Government, which again lent a proportion of them to manufacturers and others, to be employed in fresh cycles of production.

And so the process went on, huge sums being taken out of income and invested in new cycles of production-consumption, thus destroying purchasing power in vast amounts and making total prices enormously in excess of total incomes or purchasing power. The inevitable financial result of this cumulative

process was that at the end of the war hundreds of millions of pounds' worth of goods was piled up in depots, dumps and factories all over the country, but there were nothing like enough purchasers to buy them, not even that portion of them which was of use in civil life—that is, not purely military or naval articles.

Now, if the orthodox theory were correct, there must have been somewhere in existence purchasing power equal to all goods available. Quite clearly this was not the case ; even without statistical proof, no one would contend that it was so. What, then, had happened to all the purchasing power issued and included in the selling price of those goods ? It is our contention that our familiar factors, profit time-lag, suspension and destruction of purchasing power, had produced such a large cumulative effect, operating through those four or five years, as to cause total prices vastly to exceed total incomes or purchasing power available.

The disposal, the careful, guarded and slow disposal, of those surplus Government stores also affords an admirable example of the operation of the flow theory of prices and incomes. Most of us will remember that the Government had to be exceedingly wary in its efforts to dispose of its surplus stores—motor-lorries and cars spring to mind as typical examples—lest the market should be glutted, prices come down with a crash, and many holders of stocks of similar goods, as well as manufacturers, be brought to financial ruin.

But, as already said, if orthodox economics be

correct, all these goods had been paid for, and there must have been in existence purchasing power sufficient to buy them back from the Government. Thousands of people, if they had had the purchasing power, would have been glad to buy and use the motor cars and other articles. But patently the purchasing power was *not* in existence. Already, in the ordinary working of our economic system, prices are in normal times in excess of incomes or purchasing power, so that to pour into prices a huge stream of further prices would be simply to make the position fantastic and to break it up. A plethora of material, *objective* wealth would have brought about *financial* ruin and poverty.

War finance affords many illustrations of the workings of the flow theory; we have mentioned only a few of them to illustrate our thesis. Presently we will take another illustration, that of Reparations, as a further indication that our present economic *impasse* can be overcome only by taking into proper account the *relative* flow of prices and incomes and, by some means or other, so adjusting the two flows that they become approximately equal.

Before leaving the subject of general inflation, we may usefully digress for a moment to consider another curious effect which inflation produces, more especially on that quite considerable section of the community which draws annuities or pensions, fixed as a certain number of pounds sterling per annum. In their ultimate analysis, such annuities or pensions represent accumulated savings; pensions, for example, have often been described as

deferred pay. Now purchasing power, not employed as such, but saved year by year, represents at the time it was saved, in material goods, shall we say the use of so many cubic feet of housing, so much bread and other food, so many suits of clothes, and so on. In the course of time inflation has brought about a steady rise in the price of all these things; in practice, we know that this has actually happened. Consequently, when the time comes for the annuity or pension to be actually applied as purchasing power, the annuitant is entitled to receive from the producing system a smaller quantity of goods and services than was represented by his deferred pay at the time it was saved. In other words, he did not exercise, but saved, purchasing power of a certain amount, representing a stream of a certain size of material goods. When, however, he comes to apply his savings as purchasing power, he receives from the producing system an appreciably smaller stream of goods and services. The relative flow of incomes and prices has been disturbed, once again in the direction of making incomes less than prices.

Although we are dealing in these chapters with the mathematical aspect of factors which disturb the fundamental equation $\text{Incomes} = \text{Prices}$, yet we may briefly notice, in passing, the immorality—the financial immorality at least—of the process described. We may consider that a Government servant, for example, has drawn each month less than his services are worth, the remainder being saved up for him to draw after he has retired from Government service. It is as though each month he

handed to his employers a portion of his salary to be locked up in the national cash-box. But when he comes to ask for his savings to be given back to him, he finds there has been a leak in the cash-box, for his savings now represent less purchasing power than they had at the time he handed them to his employers for safe keeping. Is it too much to say that this represents breach of contract, dishonest trusteeship? The ex-Government servant undoubtedly suffers a loss; and so does trade, which is unable to sell to him as many goods as it should have been able to do. Has any corresponding gain accrued to any individual or individuals? And who, if anybody, is to blame for the unfortunate man's loss? These are pertinent questions, as interesting and important as they are difficult to answer. Perhaps later in our investigation we shall be able to answer them and to see where the fault lies.

CHAPTER XII

CAPITAL EXTENSION

WE come now to a factor much more subtle, elusive, and even controversial, than any of those hitherto considered: namely, the effect on the relation between prices and incomes of a flow of capital expenditure.

Students of finance have long been familiar with the fact, which the general public is now also fast recognising, that the power to *create* new money is a function exercised by our banking system. Surely no one nowadays seriously thinks when a loan of some millions of pounds is floated in the City, and newspapers report that within a few hours it has been subscribed many times over, that the money for the loan comes from what people have saved out of income—that is, money lying idle at the moment, waiting for an opportunity to be invested? The truth is, as business men and bankers know full well, that those who wish to subscribe to the loan deposit with the banking system securities, such as share-certificates, deeds of property, and the like. Upon the security of these, the banking system first *creates* and then lends the money required. In banking parlance, the loan precedes and creates the deposit. It is not a question of the banking system lending

what is already in existence ; the money or credit is entirely new credit, first brought into existence, and then lent to the customer.

A clear and accurate appreciation of this process is vital to a proper understanding of our thesis, and of the consequences which follow the creation of new credit, and the pouring of it into industry.

We will suppose that new credit is created in this manner, and utilised to capitalise a new industry or business. We have already seen that the immediate effect of this is to stimulate the demand for whatever it is that the new business needs to start its operations—it may be land, buildings, machinery, and so on. The prices of these rise. Then, through the operation of the profit time-lag, the increase of profits, savings, and investment of savings, the disparity between total prices and total incomes is augmented.

Now it is the contention of a certain school of thinkers that, through the operation of the factors named, the whole of the increment of purchasing power, as measured by the new capital issue, is withdrawn from the purchasing side of industry through the rise or inflation of prices, so that by the time the new business is under way and able to produce consumable goods, none of the increment of purchasing power is any longer in the hands of the consuming public, but has all been absorbed back on to the producing side of industry.

Whether this is actually so we cannot say ; it would seem to be a proposition difficult to prove rigidly. But, for our purposes, it is irrelevant

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whether it be wholly or only partially true. It is certainly partially true, and that is all we require to substantiate our main thesis, which is qualitative rather than quantitative. The total prices of goods has unquestionably been inflated, and consequently there has been a growth of the disparity between prices and incomes. In other words, the consumer, whilst the new business is getting under way, and before it has begun to produce consumable goods, has at least partially paid for the capital outlay, the factory, machinery, and so on, through the medium of inflated prices.

But as soon as the new factory starts to produce, the consuming public is required to start paying for the capital outlay all over again, through the medium of interest on capital—which will be passed back to the banking system, which made the original loan—depreciation of buildings, and so on.

Moreover, the banking system usually sets a fairly short period to its loans—that is, they have to be paid off in comparatively a few years. Hence money has to be rapidly collected from the consumer and paid back to the banking system. There it is employed to pay the interest charged by the banking system for the original loan, and also to cancel out the original loan. In other words, just as the original loan was created by the banking system, so now its equivalent is cancelled, wiped out of existence, by the same banking system. But during the time it has been in existence it has left its mark on the financial system by adding to the disparity between total prices and total incomes.

Here, again, we have an example of the extreme difficulty of levelling up income or purchasing power till it becomes equal to prices. The moment we attempt to do so, even by the creation of entirely new credit or purchasing power, without any corresponding increase in consumable goods, price-inflation at once neutralises, either wholly or partially, our efforts.

It should now be becoming more and more clear to the reader that if ever we are to arrive at a permanent solution of our difficulty, some entirely new factor, or some quite novel method, will have to be found. To this we shall come very shortly. We may anticipate so far as to point out, as no doubt the reader will have perceived for himself, that the new factor must deal at the same time with *both* incomes and prices—increasing incomes relatively to prices, and at the same time, in some way, preventing prices from rising so as to neutralise the compensating effect we are aiming to produce.

CHAPTER XIII

REPARATIONS

WE venture to think that an understanding of the flow theory throws a flood of light on to the problem of war reparations—a problem which seems to baffle the “experts” as much as the plain man. Periodically these “experts” meet in solemn conclave, decide once again what is to be the size and weight of the pound of flesh, and how and when it is to be delivered. One sometimes wonders whether it is the same experts, or a fresh set, who have whittled away the original pound of flesh until it has become a few ounces only, the method and time of delivery being also continually changed.

But we must not be unkind and poke fun at such a serious problem as the payment by one nation to others of money or goods. For we make bold to say that if the flow idea be ignored, as it practically is by orthodox economists, the problem of reparations is virtually insoluble, both theoretically and practically.

Let us examine the bare realities of the situation, which are surely simple enough. Germany is required to pay reparations, say, to France. Obviously only two ways of paying are possible—

in money or in goods. Consider first the possibility of paying in money. Now the French Government or the French people, must receive, in the last analysis, French money. German money would be of no use to them until and unless it be converted into French money. For what would they do with German money? It is of no use, ultimately, except in the only country where it is current—that is, in Germany—where it can be used for buying German goods; and the French clearly do not wish to buy German goods in Germany, at any rate in quantities commensurate with the amount of the reparations.

The next point to consider is: How is Germany to get hold of French money, so that she may hand it over to France? The French will not part with their own money except in exchange for goods or services. Then Germany must sell goods or services to France in order to obtain French money, which she can then hand back to France. But, again, will France buy German goods or services in such quantities as will provide Germany with sufficient money to pay what is required—which would mean, of course, a very thriving trade for Germany? The question has only to be asked to be answered with a decided negative.

But, it may be urged, perhaps Germany could sell her goods and services to a third nation, such as England; obtain English money, and convert that into French money. But that serves only to make two difficulties instead of one. For to obtain English money Germany must sell large quantities of

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goods and services to England, and before that English money can be converted into French money either the English or some other country must sell large quantities of goods or services to France.

It is, of course, now generally recognised that it is not possible to transfer large quantities of gold, or to exchange large quantities of money, from one country to another, without working havoc with the exchanges. And so we arrive at a dead end. Germany must pay in French money. French money can be obtained only from France, and only by Germany or some other country selling quantities of goods or services to France. In any event, before Germany can get hold, directly or indirectly, of French money, she must sell large quantities of goods or services abroad. What other countries are willing to buy German goods in such quantities—are willing to admit and accept Germany as a competitor on a large scale in markets already overcrowded? The question surely answers itself.

Let us see, then, if the other alternative is possible: that is to say, can Germany pay direct in goods? As a physical proposition, this is clearly both possible and easy. Germany can without any difficulty send train-loads of goods over to France, the money value of such goods being arrived at by any agreed means. But what is France to do with the goods? They come into France, thereby increasing the total value of goods—or prices—in France. But there is no corresponding increase in incomes or purchasing power. Total prices, therefore, become greater than total purchasing power

by the amount of the imported reparation goods. A substantial surplus of unsaleable goods is thereby created. To offer the reparation goods for sale at prices ruling for similar French goods would be to make the reparation goods compete with the French goods for a limited amount of purchasing power. Prices, according to rule, would collapse. Many French traders would be financially ruined. Financial injury rather than benefit would accrue to France.

Further, the goods having been received by France for no payment, and the Government, like all Governments, being in urgent need of money to pay its debts, the temptation to offer the goods at prices lower than those ruling for similar French goods would be very strong. The effect of such action on French trade and traders would of course be even worse than in the former case.

And so we come to another dead end. Germany can *not* pay in French money, because she cannot get hold of French money. She *can* pay in goods, but to do so creates havoc in French trade and does France far more harm than good. No wonder the experts are puzzled, and the man in the street has long ago given up the problem as hopeless.

Quite apart from moral issues, with which we have no concern here, many thinkers, recognising these financial difficulties, have from the first advocated the plan of cancelling reparations altogether, thus cutting the knot instead of attempting to untie it. Whilst this drastic plan has much to commend it, yet, regarded purely as a financial problem,

common sense revolts at the idea of nations finding it impossible for one to pay another either in money or goods. The situation is Gilbertian; it is surely a *reductio ad absurdum* of modern finance to be baffled by a problem so very simple in its physical, apart from its financial, elements.

For consider what would happen between two private individuals. A person G owes a sum of money to a person F. G has plenty of goods, but finds great difficulty in getting money, because he uses a different kind of money from F. So he offers to pay F in goods instead of money. Accordingly, he delivers to F's house periodically loads of coal, sacks of flour, baskets of fruit and vegetables, bales of cloth, and so on. Is F thereby ruined or embarrassed in any way? Nothing of the sort. F can now take a partial holiday from his work, if he so chooses. Many of his wants being provided free, he does not need to work and earn the money to buy them. He is better off than before because, apart from the proceeds of his own work, there is also coming to his house a steady additional stream of useful articles.

What, then, is it that makes the case of a nation so different from that of a private citizen? The flow theory explains this, we venture to think, fully, and also suggests the only possible remedy for the paradoxical situation. The solution must lie along the following lines. By the inflow of goods into France, total prices in France become by so much in excess of total incomes. Therefore, by some device or other, the purchasing power represented

by total incomes must be increased by a corresponding amount. Then prices will become equal to incomes, all the goods can be sold, and all is well.

Ignoring for the moment any details as to how this end could be achieved, let us assume that a way to do it has been found. What is the result? The purchasing power of the French people is increased by an amount exactly equal to the money value of the imported reparation goods. Assuming only that the French people exercise their rights of purchase, all the reparation goods are bought and consumed. The money for the goods goes to the Government, the sellers of the goods. That money is then applied to the cancellation of the war debt. As reparation goods continue to pour in week by week, so the purchasing power of the French people is increased correspondingly. The goods, although bought by the French people, are virtually a free gift to them, because the additional purchasing power comes to them without any effort or work on their part. Meanwhile the war debt is progressively being paid off. The net result is: Germany pays off her debt in goods; the French people become the possessors of more and more goods; their standard of living, assuming that they continue to work with their usual industry, steadily rises; and the French war debt steadily grows less and less.

Should it, then, be such a difficult matter to arrange for an automatic increase of the purchasing power of the French people, to correspond with the flow of German reparation goods into France? Surely such a problem should be well within the compass

of human ingenuity. At any rate, we shall ourselves very shortly offer a few suggestions as to how it could be done.

We fully admit that the above bald outline of the process is somewhat crude; in actual practice certain refinements would have to be introduced. Moreover, we have not fully followed up the matter in order to see what would happen to the money with which the Government cancelled the war debt. Thus if, for example, a portion of this were paid to private holders of war loan stock, these people then become the possessors of so much additional purchasing power. If that purchasing power were applied to the purchase of consumable articles, the increased demand would probably force prices up. Or, again, the purchasing power we are considering might be saved instead of being exercised, or invested so as to raise a fresh crop of prices. In actual practice all these factors would have to be taken into due account and provision made for them. It is unnecessary, however, for our present purposes to follow up all the possible ramifications in detail, though the reader may like to work them out for himself. The final solution will, we hope, take into proper account all these factors, without exception, giving each its due weight. We have tried in this chapter only to demonstrate the insolubility of the reparations problem from the point of view of orthodox economics, and at least the theoretical possibility of its being solved when we take into account the flow theory of economics.

CHAPTER XIV

COMPENSATING FACTORS

IN the preceding chapters we have been considering almost exclusively factors which tend to cause total prices to get ahead, either temporarily or permanently, of total incomes. If these factors were the only ones, and had the whole economic field to themselves, our economic system could not long survive—it would break its own back and come to a standstill; purchasing power would lag so far behind prices that the unsellable glut of goods would, sooner or later, compel producers to cease further production. This, of course, by stopping wages and salaries, to say nothing of profits, would still further cut down purchasing power available, and so the system would collapse. Sooner or later, this would be bound to happen, because, as we have seen, various factors are all the time at work producing a cumulative effect on the disparity between incomes and prices. It would be merely a question of time before the collapse set in.

The situation would be grotesque. On the one side we should see huge accumulations of goods and supplies of every kind piled up in factories, warehouses, stores and shops; on the other side we

should see a vast population (the very people who had made all those things) in urgent need of those very goods and supplies, but with no purchasing power to acquire them. That situation does, of course, very largely exist even to-day ; but of that more anon.

The reason that this *reductio ad absurdum* of the economic system has not long ago been reached is, of course, because of the introduction of other factors which to some extent compensate for the normal shortage of purchasing power. Some of these we may now usefully examine.

The principal factor by far is, of course, the creation of new money, new credit, and its issue through various channels to the consuming public. As was stated in an earlier chapter, every one nowadays knows that new capital issues, Government loans, and the like, are derived only in very small measure from actual savings—that is, from money existing before the loan was issued. By far the greater portion of the new issue is derived from entirely new credit, created specially for the purpose by our excellent banking system. Such credit or money has obviously not yet been accounted into any prices ; it thus serves to swell the income side of our primary equation, without affecting the price side. So far so good. The normal disparity between incomes and prices is reduced ; it may even vanish altogether. This may happen at a time when a country is developing itself ; vast quantities of new money are created and poured into the economic field ; not only may there be sufficient

purchasing power then available to purchase all the goods actually available, but purchasing power may even exceed total goods available. Then, by the operation of the usual law of supply and demand, prices rise, with results such as we have already examined.

This process has taken place again and again in most countries of the world. First, England, for example, and other leading countries enjoyed their periods of capital extension ; huge amounts of new credit were created and poured into industry ; there was abundance of purchasing power ; little difficulty was experienced in selling practically everything that was produced. There was a boom of prosperity.

But the process obviously cannot continue indefinitely, as most countries have by now found out by bitter experience. The time comes when the country is more or less fully developed ; or, as no country can strictly be said to be ever fully and perfectly developed, at least the rate of development appreciably diminishes. Then follows disaster—invariably. The stream of new credit flowing into incomes grows less ; goods and services cannot be wholly sold. A slump sets in ; trade is depressed ; poverty and unemployment are the order of the day. Politicians make speeches, probably blaming each other or affirming that better times are in sight. But all the hot air of all the politicians in the world will not add one penny-piece so as to make incomes equal to prices. It is unnecessary to elaborate the pitiful picture ; it is one with which

we are all thoroughly familiar. We may content ourselves for the moment with drawing the obvious conclusion that capital extensions, the development of a young country by increasing purchasing power relatively to goods and services available, to a great extent compensate for the normal disparity between incomes and prices ; but the remedy is temporary only, in no sense can it be permanent. For a permanent solution of our enigma we must search elsewhere.

Another factor of great importance is that of exports, which bring in money or, rather, credit from other countries. This, too, has been the salvation of those countries, such as England, which were among the first to be industrialised. Being unable, for the reasons we have studied, to absorb all her own products, because her own population had insufficient purchasing power for the purpose, England yet succeeded in getting other countries, less industrialised than herself, to take off her hands her "surplus" production. For many years this worked admirably. England became rich in money ; for the moment we must resist the temptation to comment on the fact, the full significance of which few of us perhaps have yet realised, that whilst English people may become rich in money, they do not by any means necessarily become much richer in goods, in the things they actually need for their daily lives. Claims to goods—perhaps the best definition of money—are certainly increased ; but most of these claims remain just claims ; they are never exercised as claims and converted into actual

goods for personal use. Jam to-morrow, by all means, and promises of or claims to more and more jam on succeeding to-morrows ; but jam to-day is increased scarcely at all.

But let us come back to "our muttons." After a time, other countries themselves became industrialised. They bought machinery and appliances of all kinds from England and elsewhere, and set up on their own account to produce what previously they had bought from England. Gradually they became more and more self-contained and self-supplying. Being under the same financial system, the same problems arose in their borders. Prices soon overtook and passed incomes ; a surplus of goods arose, which somehow they must dispose of. Then, not only did they cease to buy goods from England, but they actually commenced to send their goods into the very markets which England previously supplied ; they have even sent their goods into England itself.

Here again, to cut a long story short, it must be obvious that we have no permanent remedy for our primary trouble, that incomes are always less than prices, in the export of surplus production. For a time, receipts from exports undoubtedly help very greatly to make up the deficit of incomes and enable the surplus goods to be sold. But the remedy is only temporary ; very soon importing countries become exporting countries. All countries in time, under our present financial system, become countries seeking to export. Each and all of them has surplus goods, a deficit of purchasing power. Each

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and all must send away their surplus goods and hunt for purchasing power outside their own borders.

This is, of course, the state of the world to-day. Most countries are now industrialised ; all are using the same financial and economic system ; all have a surplus of prices over income ; all must seek to export. And so we have the tremendous clash and conflict, each nation striving its utmost to dispose of its surplus goods in a market which is growing ever smaller and narrower. The people of a given country may be actually starving for want of corn ; at the same time that country may be exporting corn ; its own people, who grew the corn, are perishing for lack of it, having insufficient purchasing power to buy the products of their own labour. So the corn is touted all over the world in the terrific struggle to get *money*. Is not the situation paradoxical ? If only by some means each country could arrange, within its own economic borders, for total incomes to be equal to total prices, then its people could buy its own products—so far, of course, as these were actually suited to the people—for their consumption and use.

But again we digress somewhat. Let us once more get back to “ our muttons ” and arithmetic. It must be clear to the reader, as already said, that we can hope to find in exports no permanent solution of our primary difficulty. All industrialised countries suffer from the same complaint—purchasing power is less than prices. It follows that the total purchasing power collectively of all industrialised countries is less than the total collective

prices of those countries. There is clearly a world-shortage of purchasing power. No one but a mad-man would expect to find a solution in each country trying to make good its own deficit of purchasing power by grabbing purchasing power from other countries, which are already themselves short of that essential element. Once more we are baffled.

We trust that by now the reader will be convinced of two things: firstly, under our present economic system, there are very many causes at work which tend to make incomes less than prices; secondly, the only remedial or compensating factors, tending to make good the deficit of incomes, can in no sense be regarded as permanent remedies. They are purely temporary, and in the long run tend only to aggravate the primary trouble.

CHAPTER XV

“PERIL OF THE BUMPER CROP”

THE present writer can never be sufficiently grateful to the *Daily Mail* for a poster, displaying in large letters the above five words, which he saw in the City of London some years ago. Seeing those words, and realising in a blinding flash of illumination all that they signified, he saw more clearly than ever before the futility of orthodox economics and the gigantic nature of our present economic hoax. Could human ingenuity epitomise in any other five words a more devastating indictment of our present insane economics? *Peril of the bumper crop*. Cruel, improvident Providence thus to interfere with men's plans. Nature had made a grave mistake; she had been too lavish; she had made one-and-a-fraction ears of corn grow where previously one only had grown. Hence the peril. Ruin stared farmers in the face. There was too much corn for the “market to absorb.” Why did not Nature think, before she did this thing? Did she not know that prices would slump; that farmers would become bankrupt, the prices they would be able to get being insufficient to meet their outlay in producing this absurdly bountiful crop? What woe-

ful prosperity ; better far some kind insect to eat up half the crop ; then there would be a scarcity of corn in Egypt ; up would soar the price of wheat, there being insufficient corn to satisfy the hunger of men, and the farmers would make their fortunes.

But let us have done with satire and return to unfeeling, unsentimental arithmetic. What had happened is perfectly clear. Owing to Nature's bounty, a quantity of goods (corn), larger than usual, had come into being. With this larger quantity of goods, no additional purchasing power came into being. Consequently, the whole of the goods, or as much of them as possible, had to be squeezed into such purchasing power as was available. The price must fall, and moreover in all probability fall far more than mere arithmetic demanded. For, in order to meet their cash liabilities, corn-growers must have cash, within a limited time. Hence they must sell, no matter at what price. The more farmers there were who had pressing cash liabilities, the greater the slump in the price. As soon as the most pressed farmers had sold their corn, paid off their debts, and probably gone bankrupt, the need to sell would probably be less urgent ; so prices would " recover " somewhat. If enough farmers could hold out, and hold up their wheat, getting along somehow without cash for a time, the market might remain fairly steady and the store of corn eventually be unloaded. But not all of the corn-growers can do this ; there is bound to be a steady stream of bankruptcies amongst these unfortunate men who have done only too well the task they

set themselves to do—to grow wheat for the people's bread.

It is now well known that many similar events have occurred in many other large industries, such as ~~as~~oil, rubber, cotton, coal and many others. There is financial peril arising out of an increased production of any commodity, the simple reason being that our present economic system makes no attempt whatever to equate purchasing power with the money value of the goods produced. It is all left to chance. The issue has been expressed pithily thus : a man who grows a ton of potatoes does not at the same time produce the power to purchase a ton of potatoes.

So, under our present economic system, the extension of the work of Luther Burbank into the production of foodstuffs and materials such as rubber, cotton, silk, flax, and the like, would be fraught with the greatest peril to large sections of the human race. Supposing a super-Burbank succeeded in producing, without additional cost, ears of wheat as large as bananas, apples as big as turnips, strawberries as large as melons, and corresponding increases in the yield of cotton and flax plants, our whole economic structure would be thrown into jeopardy. Literally millions would be ruined. But worse might yet happen. Supposing a super-Edison succeeds in bursting open the atom, at negligible cost, and releasing its incredible stores of energy. How ghastly would be the ruin that would overtake industries such as those of coal and oil. No doubt eventually we should find a means

of readjusting our lives to the new order of things, but for a time there would be widespread havoc and misery.

Examples such as these all tend to demonstrate that there must be something unsound in our methods of finance. Our economic system is rigid and inflexible, where it patently should be flexible and capable of being instantly adjusted and adapted to meet changes in methods and quantities of production, and in the yield of human effort.

Again we venture to claim, with confidence, that an application of the idea of the flow theory of economics alone can satisfactorily explain such paradoxes as the peril of the bumper crop, and also lead to a rational and practical solution of the difficulty.

* * * *

Since writing the above, the following have come to hand: from *The Daily Express* for June 22nd, 1929: “DISASTER FOR POTATO FARMERS: Vast quantities that cannot be sold: Paying to give them away . . . 20,000 tons of magnificent potatoes . . . doomed to be used as manure . . . smallholders are staring ruin in the face . . . bumper crop . . . 7·2 tons per acre—a record . . .”

From *The Manchester Guardian* for June 26th, 1929: “. . . American farmers, dreading Nature’s bounty of a good harvest. . . . America’s whole efforts are now concentrated upon developing her own exports, and keeping out other people’s. The situation . . . casts its shadow on every hope of industrial revival in this country.”

CHAPTER XVI

SYNTHESIS

As stated in the preceding chapter, we are now almost ready for the final stage of our inquiry. But, in order to make quite sure of our conclusions, let us briefly review and recapitulate the ground we have already covered and endeavour to ascertain quite definitely the nature of the total *net* effect on our primary equation of the various factors we have examined.

Let us re-state the position from the beginning. We started with the assumption, regarded as axiomatic, that, if any economic system is to function continuously, and to achieve its purpose, that of distributing to those who take part in it the means of livelihood, total incomes must, in the last analysis, be at least equal to total prices.

A very slight examination brings to light the fact that this theoretical equality does not persist in practice. A number of factors intervene to disturb the equality; these operate broadly in three ways :

(1) Through the profit time-lag; profits are charged into prices at the moment of sale, so that the profit element cannot become effective as pur-

chasing power until *after* the sale is effected. Hence incomes must always lag behind prices to some extent.

(2) Through suspended purchasing power, due to purchasing power not being exercised as such. In this group of factors we have ordinary savings; reserves; some kinds of depreciation; insurance; and no doubt many other items of similar nature which cause purchasing power to be withdrawn from the consumer and then suspended, that is, not restored to the cycle of production-consumption, for a greater or lesser period of time.

(3) Through destroyed purchasing power. This is probably the most important of the three elements we have isolated. It is brought about by purchasing power, which properly belongs to one cycle of production-consumption, being transferred and utilised to set going another cycle of production-consumption, thus leaving an unbridgeable gap in the first cycle.

These three factors are brought into operation in a great number of ways. One of the most important and widely spread effects arises automatically out of what we call the law of supply and demand. Modern industry is not like a smoothly running river, moving with equal velocity at every point. On the contrary, it presents a highly irregular surface, much more like rapids running over rough beds with many rocks near the surface and others projecting above the current. The course of industry is thus constantly subjected to spurts and depressions. There is a boom in this

trade, a slump in that ; some industries are working overtime, others are stagnant. After a short time, flourishing trades languish ; moribund industries come to life again. Resulting inevitably from this, the prices of one set of articles rise rapidly, only to fall again when the boom is over ; the prices of another set of articles suddenly drop, and as suddenly flare up again. Now it is well known that it is very easy for prices to rise, but much more difficult for them to fall ; furthermore—and this point is important—there is virtually no limit to which prices may soar ; but there is a limit to which they may drop—the limit of cost. If they fall below cost, then there is disaster and bankruptcy. It is clear, therefore, that the net results of all these spurts and booms is to add to the disparity between incomes and prices. For, whenever there is a boom, profits increase, the time-lag increases, savings are made, resulting in suspension of purchasing power, investments are made, resulting in destruction of purchasing power. Slump periods, on the other hand, short of actual bankruptcy, produce a purely negative effect on our fundamental equation ; at best, if goods are sold at bare cost, the equation is left as an equation ; slumps, short of actual bankruptcy, can never add to incomes relative to prices, so as in any way to compensate for the increase of prices relative to incomes due to booms.

Whilst all these factors are continually swelling prices as against incomes, new credit, on the other hand, such as that for capital extension, swells

incomes as against prices. But the stimulant is only temporary; capital extension cannot go on indefinitely; as soon as it ceases, or diminishes in volume, the original state of affairs returns; and it is even worse than before, because the flow of new credit inevitably causes prices to rise, with the usual effects of increase of the profit time-lag, suspension and destruction of purchasing power.

Now, as we said earlier in this book, we have the whole time been dealing with these various causes and their effects qualitatively only, not quantitatively. How, then, can we estimate the actual total effect of each factor, and the actual net effect of the totality of all the factors together? To study the matter on a statistical basis would be exceedingly tedious and laborious; and, moreover, it would have to be for a specific period, the results of which might be quite different, at any rate in degree, from those of another period. Let the past bury itself; what we want to know, as practical people, is the net effect of all these factors in England to-day, and to estimate if possible what is likely to be the net effect in England in the immediate future.

This is a very easy matter, because there are abundance of symptoms only too apparent to-day all through our industrial and economic life. Those symptoms are such as must necessarily follow if, as we affirm, total incomes are chronically and persistently less than total prices. If those symptoms unmistakably exist, and are the logical consequences of incomes being less than prices, then it

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is a fair presumption that our diagnosis of the fundamental disease is substantially correct.

Now, what are the kinds of effects which must inevitably follow from incomes being chronically less than prices? Obviously, production will be ahead of sales; the whole emphasis of industry will pass from the factory to the selling department, from the workshop to the counter. Competition to *sell* will be the order of the day. Salesmanship will be accounted more important, and even more worthy, than manufacture. Money will be made—that is *collected* from the public; only banks can *make* money—by merchants and shopkeepers rather than by manufacturers. Advertisement, in order to attract customers, will become a highly developed art, gigantic sums being expended upon it in the hope of capturing a share of the very limited contents of consumers' purses. Competition for external markets, markets in other countries, will be intense and bitter. There will be strong resentment against merchants of other countries invading our market; many countries will erect high tariff walls in order to keep out foreign goods and so retain for themselves the right to collect from consumers a maximum amount of their purchasing power. Purchasing power being deficient, efforts will be made to cut down costs, to economise, regardless of the fact that lower costs mean lower wages, and lower wages mean less purchasing power. Every possible device will be invented to stretch the deficient purchasing power to cover so far as possible the gulf between incomes and prices. The

instalment system is one such device, and it is well known that its use is rapidly spreading. Building societies afford another example of the same principle in operation. And so we could go on giving example after example, *ad nauseam*. Money, money, money will be the cry everywhere. Practically never does one hear even a suggestion that this or that *thing* cannot be obtained: that there is any deficiency in the supply of any article: put your money on the table, is the cry of modern industry, and we will supply you with whatever you want, in whatever quantity you like to name, and of any quality you are pleased to specify. The problem of production is solved, say the engineers and manufacturers; we can make anything. Remains only the problem of distribution and consumption. The house is full of bread; its occupants are hungry; the problem is to arrange for them to eat. Truly a gigantic problem and puzzle!

Tragic as is the situation, and fraught with the misery of literally millions of men, women and little children, it has also in it—as perhaps has all great tragedy—the essence of high comedy. It is an apotheosis of paradox; may we say even of insanity? On the one side, hunger; on the other, food for which “markets” are insufficient. A slump in the textile trades, perhaps also in clothing and tailoring trades: over against it, millions of people desiring, many of them urgently needing, clothing of all kinds. Workmen walking to work because they cannot afford bicycles or motor-cars: meanwhile, cycle and motor-car manufacturers at their wits’

ends to know how to dispose of their vast output of cycles and motor-cars. Thousands of families shivering round a miserable fire, or an empty grate, trying to get warm; coal-owners unable to sell ~~their~~ coal and complaining of bad trade. Hundreds of thousands of people, overworked, jaded, in need of rest, recuperation, recreation, holidays: hotels, boarding-houses, lodging-houses, pleasure resorts of every kind, straining every nerve to fill their rooms with guests.

And the situation applies by no means to England only. On the contrary, in many aspects it has assumed world-wide proportions. Whilst in one part of the world there is famine, in other parts wheat is being burnt in order to "maintain the price." The people of the world could easily do with more rubber goods, from tyres for motor-cars, bicycles, perambulators, to hot-water bottles; but there is too much rubber produced, so a Mr. Stevenson arranges for the supply to be restricted. Motorists dare not use their cars as much as they would like, because petrol and oil cost too much; meanwhile the petrol companies limit their output so as to keep prices to the level they require.

Moreover—and let this be clearly understood—we do not for one moment presume to blame any single individual or group of individuals for this state of affairs. Purchasing power being deficient, suppliers *must* restrict their outputs; were they not to do so, the competition to collect what there is of purchasing power available would inevitably bring about a collapse of prices, and suppliers would

be ruined. Our present system of costing being what it is, and the "law" of supply and demand being allowed to work itself out without any attempt to regulate it in any way, all these things must happen. They are the logical and inevitable result of the system as a system.

And so the miserable story could be continued and elaborated. The one thing, and the only thing, needed to end it, is *power to purchase, claims to goods*. And what, in themselves, is this power to purchase, these claims to goods? In themselves they are abstract things, invisible somethings, merely the power or permission for people to claim and use the things which their owners and makers are only too anxious to hand over to those who need them.

But what is the physical representation of these abstract things, this permission to claim and use? How is this permission represented in the workaday world? This is where the comedy enters. They are, in the last analysis, represented by figures written in books (bank ledgers and pass books); by specially printed pieces of paper (paper money, cheques and the like). Human ingenuity has reduced the practical problem of buying and selling to an exchange of tangible goods and services for intrinsically worthless pieces of paper, for figures written by a clerk in books. But the method of computing the size of the figures which it is permissible to write down, according to the rules, is faulty; men are all the time writing down figures which are too small, which do not fully measure

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the money value of the goods they are intended to buy.

In order to correct this mistake, in order that the hungry may have access to the surplus food, ~~that~~ the shivering may warm themselves round fires burning the coal which is a glut on the market, in order that children may be able to play with balls made out of the very rubber of which there is "over-production," no change in physical things is required ; no one need do any more work ; no one need give up anything. Merely some device has to be invented which will make the *measure* of purchasing power equal to the *measure* of goods and services. The deficit is an artificial one ; another artifice alone will remove the deficit and make once more into a true equation—Incomes = Prices.

Now let us, in the next chapter, seriously tackle this last remaining economic problem, the solution of which would lift from the backs of the human race a burden perhaps heavier than any which hitherto has weighed them down, and would release a volume of contentment and happiness probably greater than any other single reform could, at the present time, achieve.

CHAPTER XVII

SOLUTION

OUR problem can now be stated quite simply. Owing to various causes, some of which we have located and examined, incomes or purchasing power are chronically less than prices. Somehow or other we have to make up the deficit ; we have to find a means of adding to incomes or purchasing power an increment just sufficient, and no more, to make total incomes equal to total prices.

Now it would be very easy—how fatally easy Germany and Russia, for example, know only too well—for the State merely to print and issue paper money. If this is done, purchasing power is increased, for the moment ; but the very next moment, the effects of inflation follow ; prices rise, and the situation is worse than before. If more paper money is issued, the situation rapidly goes from bad to worse ; in a short time it gets entirely out of hand and impossible. All this is known full well. If we are to issue new purchasing power, as we must do, it is absolutely imperative that, *at the same time*, we prevent inflation. In other words, that we prevent prices from rising. If we can be absolutely assured that prices will not rise,

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then our problem is virtually solved. The new purchasing power remains *power* to purchase ; it is not robbed of its *power* to be a claim-to-goods-and-services by the vicious circle of inflationism.

• The practical methods of issuing new purchasing power are legion ; they present no difficulty whatever. Later, we shall make a few suggestions as to what seems to us the neatest and easiest way of doing what we want to do. So let us for the moment leave this comparatively simple detail—for, after all, it is but a detail, a device of book-keeping more than anything else—and fasten on to the crux of the whole problem—the prevention of inflation through rising prices.

Now, for some curious reason, most people seem still to adhere to the principle that it is unsound, almost immoral, to interfere with what we call the “law of supply and demand.” And yet, as Ruskin long ago demonstrated, it is by no means a universal law, but only a very partial and restricted economic rule. There are countless exceptions to it.

But, however that may be, it has actually been interfered with, by ourselves, and quite recently. We all recollect how, during the recent war, prices soared to almost inaccessible heights, owing to the vast supply of new credit that was poured so lavishly into industry. Soon the position became so intolerable as to constitute a national danger ; something had to be done about it ; interference became an imperious necessity. So the “law” was interfered with. By statute, the top limit of prices of many supplies and articles was fixed, and it was illegal

to sell such supplies or articles at prices exceeding those limits. So the terrible thing has been done ; it had to be done ; and it was done successfully, though many think it ought to have been done much sooner. But that is by the way ; our point is that it is perfectly possible, in fact easy, to fix by statute the top limit of prices, without any harmful effects necessarily following.

At this point we may just note that the so-called law is also continually interfered with in another way—by public opinion, the good sense of the people. During the war period this was very plainly visible, and to a limited extent effective. According to the so-called law, the price one may charge for an article is measured solely by the strength of the demand for it. The law is epitomised in the following pithy dialogue : “ What is the price of this article ? ” “ How much have you got ? ” “ That is the price of it.” The unfailing sound sense of decency of the British public condemned, and surely rightly condemned, the unrestricted operation of this precious law of supply and demand. To push the law to its limit was condemned and pilloried as profiteering. To a fair and reasonable profit, no one objects. But to an outrageous and exorbitant profit every one rightly objects, recognising the intrinsic immorality of trading on another person's, or the State's, drastic need. Gentlemen do not charge for a cup of water the price that a man dying of thirst might be willing to pay for it. Thus we see that the law of supply and demand is far from being a law in any general or universal

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sense. It has to operate within restricted limits, and, if we choose, we are perfectly able and at liberty to interfere with it *pro bono publico*, as much as we please. We have done it in the past and we can do it again.

Thus we have ample precedent for fixing the top limits of prices, and hence for checkmating inflation, before it has a chance to begin. So our problem is virtually solved. By simple acts of legislation, we can, as a community, fix the top limits of prices at which it is legal to sell. It is by no means a difficult matter for committees of experts to examine costs carefully, to allow for a fair margin of profit, and to fix prices, if necessary at every stage of production, manufacture and distribution, precisely as was done in many instances during the war period.

Now let us be eminently practical and take a concrete example of the application of our solution. That solution is to consist of two things: *and these must be applied simultaneously*: (1) new purchasing power is, by some device or other, of which there are many, to be issued; (2) the top limit of prices is to be, at the same time, fixed by law. For our example, let us take an article of practically universal use—namely, coal. Let us further assume, for the sake of having a definite figure to work with, that sufficient additional purchasing power is to be issued to cover half the present total selling price of coal at the pit-head. Let this additional purchasing power be issued to those who sell the coal at the pit-head, *conditionally on their selling their*

coal at half-price. The sellers thus obtain their full and proper price for their coal ; what they lose on their sales to the public they gain from the purchasing power issued to them by the State. Meanwhile, coal enters the market at half-price. Allowing for cost of transport, middlemen's profits and the like, let us assume, again merely to have a figure to work with, that the ultimate consumer gets his coal at two-thirds its former price, on the average.

Now, what would happen ? Everybody would be able to buy coal at two-thirds its previous price ; the cost of living would be considerably reduced for every one who uses coal either directly or indirectly. For coal enters into the cost of almost everything ; it is used for power to drive the machines which make things ; for the heating of factories, shops, houses, railway trains, theatres ; for transport by land and water ; for generating gas and electricity : and so on in countless ramifications. Hence there would be a substantial reduction in the cost of nearly every article and service. In addition, assuming for the moment that the public bought exactly the same quantity of coal as before, there would remain in the pockets of the public purchasing power representing one-third of what they used to pay for coal.

Now what would the public do with that unexpended purchasing power ? Some of it would unquestionably be spent on more coal ; many people would indulge in more fires ; there would probably be a boom in central heating installations for houses.

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The demand for coal would increase appreciably. But, the price being fixed by statute, at its top limit, there could be no rise in price. On the contrary, output being increased, the proportion of Overhead charges to live charges would be reduced ; the margin for profit would be increased. The tendency would be for the price of coal to come down, rather than go up. The price being so low, to the public, suppliers would feel assured of a steady market. They would feel safe in spending money on improvements in their machinery, their methods, their organisation for distribution, and so on, so as to make costs still less and enable the price to be still further reduced. The reduction of price would ramify all through industry, pulling down the cost of nearly everything.

But let us turn from this rosy picture and try to discover whether there are not some thorns lurking behind the flowers of prosperity in the coal business. What would the public do with the saved purchasing power which they did *not* apply to the purchase of more coal ? Clearly much of it would be applied to the purchase of other articles ; shall we say, for the sake of example, clothes and boots ? This increase of demand would tend to force prices up, and this tendency we have to set against the reduction of costs brought about by the cheaper coal. On balance, we may be permitted to guess that the tendency for prices to rise would be greater than their tendency to fall. No matter, ~~we can~~ counteract this as easily as we did in the matter of coal. The State again steps in and fixes

. the maximum prices it is permissible to charge for the materials used in clothing and boots—wool, cotton, silk, linen, leather, nails, and so on. Thus prices cannot rise ; but, the demand for clothing having increased, more has to be supplied ; ~~the~~ increase of turnover will make costs less, the margin for profit greater ; and the eventual tendency will be for prices to fall, rather than rise, precisely as was the case with coal.

And so we might continue our examination of the results, in various directions, of the issue of additional purchasing power. Where prices are fixed, obviously the increased pressure of demand cannot force them up ; on the contrary, the increased turnover gives prices a tendency to come down. The moment prices tend to rise in any particular direction, it is time for the State to step in and fix maximums, thus converting a potential rise of price into an actual fall.

As to how far it may prove in practice necessary for the State to step in and fix the upper limit of prices, we need not consider here. It is possible that State fixation of price would have to be applied to a very large number of articles ; or, on the other hand, it might in practice prove sufficient to apply it to the principal basic supplies, such as coal, timber, raw metals, building materials, food supplies, and the like. But we are not here concerned with the details of practical statecraft. Our business is with principles only, and if we have to some extent elaborated an actual example it has ~~been~~ only with the idea of showing that the principle is

capable of being applied to practical life and industry.

But there is still another important point which has not been explained sufficiently. Financiers, bankers, and others, will no doubt instantly object that the fresh purchasing power with which we have been dealing cannot be "issued" as we have so naïvely and glibly described. Up comes the old, old query: "Where is the money to come from?" The direct answer to that is another query: "Where does all money come from?" But we grant that that is a retort, rather than the explanation to which the reader is fully entitled.

Well, then, where does money come from? We need not, of course, trouble about the very small fraction of the total money we use which is represented by coin and notes; these are only the small change of our monetary system. The vast bulk of our money is cheque-money, bank-money, if that term be preferred. Now, where does this bank-money come from? How is it made and issued, and to whom, and why, and on what principles is its quantity regulated? Whence, for example, came all the money that financed the war? No one would contend that it existed before the war broke out. And yet it came, from somewhere, in ever-increasing quantities, to the tune of thousands of millions of pounds. Perhaps an equally pertinent query is: Where does money go to, when it disappears? What has happened to those thousands of millions of pounds expended, mostly in our own country, during the war? Once it was

purchasing power ; how and why has it been deprived of its power to purchase to-day ? Where is it now ? We call it War Loan, and by a score of other names. But, as purchasing *power*, it is almost dead. True, it can be sold and the money so obtained applied as purchasing power. But this could not be done on any considerable scale, because the price of the scrip would soon drop and much of its value would vanish. In any case it would be quite impossible to re-convert the whole of it, or even an appreciable proportion of it, into purchasing power, because there are not sufficient quantities of purchasing power available to obtain in exchange.

Can money or purchasing power then come into existence, apparently from nowhere, and equally unobtrusively disappear ? Certainly ; it is always doing so, in countless ways. Thus, for example : money or purchasing power is invested in securities of one kind or another. A rumour, a scare, the death of a prominent man, or even a false report of his death, a threat of war, bad weather, or any one of a thousand causes, may lead to a fall in value of the securities. An appreciable fraction of the money or purchasing power which they once represented has thus vanished out of existence. Similarly, any one of another set of causes may lead to a rise in the price of the securities, thus increasing the money or purchasing power which they represent. Again, a man applies so much purchasing power to acquire land near a town ; the town expands towards his land ; the value of

his land increases perhaps five- or ten-fold, thus representing 5 or 10 times as much purchasing power as it did previously. Or, the town may move away from his land, or an ugly factory be erected near it, or a sewage farm made in the vicinity, so that its value is decreased, the purchasing power it represents being thus diminished. Many other instances could be given, all showing that the intangible thing we call purchasing power is continually springing into existence, from nowhere, and continually disappearing.

But let us be still more concrete. Here is a common example of a very ordinary process of money creation and destruction, from the experience of the present writer. A few years ago he wanted £2,000 to build a house. He had no money for the purpose, but was the possessor of another house valued at rather more than £2,000. Followed a short interview with his bank manager, the signing of a paper, and the deposit with the bank of the deeds of the existing house. Then he was permitted to draw cheques up to £2,000 to pay for the new house as it was erected. That £2,000 did not exist, as purchasing power, until his cheques were handed to his builder. It was new money, new credit, and, as it did not for some time produce any consumable commodity, it was *inflation*; it was an increase of purchasing power, let loose into the building trade, without any corresponding increase of consumable goods.

The above is, of course, the normal way of obtaining a bank overdraft; that is, of permission to

make—in the literal sense—money, new money, in most cases inflationary money. Eventually the new house was completed, the old one sold, and the proceeds of the sale handed to the bank. The overdraft was paid off or cancelled, and £2,000 of purchasing power vanished out of existence. £2,000 was destroyed; deflation occurred. Thus the present writer, in his very small way, was able, with the assistance of our wonderful banking system, to create £2,000 of new purchasing power, and a few months later to destroy a similar amount of purchasing power.

But still our objectors will raise a query. In the above elementary transaction, before the new purchasing power could be created, some security or “collateral” had to be deposited with the bank. There must always be something tangible or realisable “behind” any overdraft that is permitted to come into existence. That is true; we admit the point, freely and fully.

In the case of the proposed issue of purchasing power, designed to make good the deficit which we know exists between incomes and prices, we have a magnificent asset or collateral as security for the new purchasing power. For, as we have seen, incomes being less than prices, there is a block of prices, that is, goods and services, for which no purchasing power, that is *claims*, exist. Those goods and services are waiting to be claimed; and they are real, tangible things, actually in existence. Clearly, no particular person or group of persons could establish any claim to them. If they belong

to anyone, they belong to the whole community. Hence the State, representing the community, is fully entitled to claim those surplus goods and services for the public. This it can do by issuing purchasing power to the public. If it chooses, it may use this purchasing power itself, directly, for State purposes, such as building roads, national defence, and the like. Or it may use it to finance the ordinary machinery of government, remitting a corresponding amount of taxation. Another way of utilising this additional purchasing power, which has often been suggested, and which has very many attractive features, is for the State to issue to every man, woman and child, a "national dividend." Every one, then, would share equally in the distribution of this at-present-undistributed national asset, this claim to an appreciable fraction of the nation's total output of goods and services. In the language of accountancy, it represents a secret or hidden reserve, locking up as fixed money what might be applied by the customers of a business to buy the products of that business. The time has come when it may safely be liquidated and issued as a bonus dividend to the shareholders, in order that they may themselves purchase the products of their own business. But we have no wish to enter what perhaps belongs, at best to statecraft, at worst to party politics, by advocating any one of the myriad possible methods of distributing as purchasing power this undistributed national asset.

Another plan that has been suggested for issuing the new purchasing power, is to use the National

Debt. The National Debt once represented live purchasing power; now it is frozen purchasing power, and is stagnant, dead money. The State could therefore make good the chronic deficit of incomes by issuing new money—we do not of course mean coin or notes, but ordinary bank-money—and paying off the holders of National Debt scrip. The debt would thus be wiped off, so that taxation to provide its interest could be remitted, and a stream of liquid money would be poured into the economic life of the nation. From being an exceedingly burdensome liability, the National Debt would thus become a convenient mechanism for the State to honour its liabilities and at the same time to provide its citizens with the additional purchasing power to which, as citizens, they are entitled.

We believe we have now answered all the objections mentioned. If our thesis is correctly reasoned, there *is* a deficit of purchasing power; that deficit represents a substantial asset, because a quantity of goods and services are held up, unsaleable and unclaimed, there being no purchasing power in existence to liquidate them; such an asset is patently a perfectly sound basis or security on which may be erected a national credit structure, whatever form that structure may take. Such additional issue of credit ultimately resolves itself into purchasing power which will enable the general body of consumers to obtain and to consume, instead of a portion only, the whole of the goods and services which they themselves produce. In this way, and we venture to claim, in this way only, can total

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incomes be made equal to total prices, and our wonderful productive system fulfil the only possible purpose for which it exists, that of enabling our population, as consumers, to consume what, as producers, they produce.

In this way could poverty, with all its attendant misery and distress, be abolished, and men have leisure and energy to turn to objectives worthier and more ample than that of merely gaining a meagre livelihood, man struggling against man, class against class, nation against nation, all to secure a share of the very inadequate supply of purchasing power which is at present distributed through our defective economic system, until the struggle and strife become so severe that they can no longer be endured; then come the plagues of strikes and lock-outs, fights for markets and for places in the sun, and that barbarous anachronism, war.

There is one further point, in conclusion, which may be mentioned. In practice, the State would have to determine how much new purchasing power should be issued in order to make total incomes equal to total prices. In the examination of our present economic system, which we have been attempting in this book, we have all along dealt with our subject on a qualitative rather than a quantitative basis; but in this instance we may make an exception and give some indication of the general lines on which it would seem practicable to solve ~~our~~ problem in terms of quantity. First, it should not be beyond the power of a State department, set up for the purpose, to ascertain, at least

approximately, the total selling prices of all goods and services made ready for final purchase and consumption by the public in a given period ; this, being a total of goods and services brought into the field for sale in the home market, would have to include all imports and exclude all exports ; the net result would give us what we seek—total prices for that period. Similarly, it is unquestionably well within the powers of State departments to estimate the total national income during the same period. Then we should have an equation as follows :

$$\begin{aligned} \text{Goods and Services produced} + \text{Imports} - \text{Exports} \\ = \text{Total Prices} = \text{Total Incomes} + x \end{aligned}$$

where x is the additional purchasing power which the State should issue.

No doubt other methods, perhaps simpler than the above, could be devised by statistical experts for arriving at the value of x ; the above tentative solution is given, with all reserve, merely to indicate that the problem is well within the power of human ingenuity to solve.

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